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EXAMINER

ALBERTALLI, BRIAN LOUIS

ART UNIT PAPER NUMBER

2655

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,145

Applicant(s)

WU, MARK

Examiner

Brian L. Albertalli

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 6, 2005 has been entered.

Response to Amendment

2. The amendments to the claims have been entered. Claims 1, 11, 14-16, 18, 19, and 28 are currently amended.

Response to Arguments

3. Applicant's arguments, see pages 13-14, filed September 6, 2005, with respect to the rejection(s) of claim(s) 18 under 35 U.S.C. 102 (e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 103(a) over Du et al., in view of Altare et al. The modification of Du et al. to record audio files would have been obvious to one of ordinary skill in the art at the time of invention in view of Altare et al., as will be further explained in reference to the rejection of claim 1, below.

Claim 25 depends on claim 18, thus the previous rejection of claim 25 under 35 U.S.C. 102(e) is also withdrawn, but a new ground of rejection is made under 35 U.S.C. 103(a) over Du et al., in view of Altare et al.

4. Applicant's arguments, see pages 18-19, with respect to the rejection(s) of claim(s) 11 under 35 U.S.C. 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Schurecht et al. (U.S. Patent 6,260,157).

Furthermore, the current amendment of claims 11 and 14-16 raise 35 U.S.C. 112, 2nd paragraph issues for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Applicant's arguments with respect to the rejection of claim 19, see pages 14-15, have been fully considered but they are not persuasive.

The Applicant stated that the audio controller disclosed by Du et al. is a "general-purpose audio controller capable of receiving, playing, and/or decompressing any type of audio data" (see column 7, lines 11-19 of Du et al.). The fact that the audio controller is "general-purpose" and capable of playing "any type of audio data" means that the format of audio data that is to be played must inherently be *determined* and the format *transmitted* to the DSP, so the general-purpose audio controller would correctly decode the audio data. That is, in order for an audio controller that can play any type of audio data (a plurality of audio formats), the controller must determine what format a particular

file is, so that the proper decoding algorithm is loaded onto the DSP to decode the audio data. Without determining the format, the general-purpose audio controller would not function.

6. Applicant's arguments with respect to the rejection of claim 1, see pages 16-17, have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case, the Applicant has attacked the secondary reference (Altare et al.) for including a MP3 encoder/decoder that uses a microprocessor (MPU 31) to move data to a hard disk. While Altare et al. alone may teach using the microprocessor to move audio files to the hard disk, the combination of Du et al. and Altare et al. meets the limitation. That is, Du et al. teaches a primary device attached to a storage location (Fig. 1, core logic chipset 14 attached to HDD 20 and CD 22), that switches file access control of the primary device's storage location from the primary device to an audio device after the primary device has been placed in a power saving mode (Fig. 2, MP3 controller 18 controls HDD 20 and CD 22 when the system is off), but is only missing the limitation that audio files can be recorded to the storage locations (Du et al. only discloses playing audio files from HDD 20 and CD 22). However, Altare et al. discloses

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an MP3 controller that is capable of playing (decoding) as well as recording (encoding) audio data. While the MP3 encoder/decoder of Altare et al. may use the microprocessor (MPU 31) in the specific embodiment disclosed, *it would have been obvious* to modify the MP3 decoder of Du et al. (MP3 controller 18, which provides access to the primary device storage locations while in power saving mode) to include the capability to record audio data (by providing an ADC and stream encoder section similar to the decoding circuitry 56 of Fig. 4 in Du et al.), given the teachings of Altare et al. that, generally, MP3 encoding and decoding functions can be performed by a single MP3 encoder/decoder unit.

Therefore, the rejection of claim 1 stands. Additionally, the explanation above applies to currently amended claims 18 and 28, and those claims are rejected under 35 U.S.C. 103 (a) for the reasons given above.

7. Applicant's arguments with respect to the rejections of claims 21 and 35, see pages 19-21, have been fully considered but they are not persuasive.

Regarding the Applicant's arguments that Du et al. and Altare et al. do not disclose a karaoke feature while the primary device is in the power saving mode, and that this applies to claim 18, it is noted that a karaoke function is not a required limitation of claim 18. Claim 18 only requires a function to be selected from the group consisting of recording sound the primary devices location and providing a karaoke feature while the primary device is in power saving mode. Since, as explained above in reference to

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claim 1, recording sound to the primary device location is an obvious modification of Du et al., in view of Altare et al., the arguments as applied to claim 18 are considered moot.

The Applicant's arguments as they may be applied 21 and 35 under 35 U.S.C. 103 (a) as being unpatentable over Du et al., in view of Altare et al., and further in view of Lee is also not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Again, while the Applicant has attacked Lee for disclosing an MP3 karaoke player that uses a microprocessor to output an accompaniment sound stored in sound module 1, it is the combination of Du et al., Altare et al., and Lee that meets the limitation. The combination of Du et al. and Altare et al. meets all of the limitations of claims except playing audio files at the same time that sound is accepted in the microphone. Lee teaches an MP3 controller can be used to perform the functions of a karaoke machine (i.e. accept sound input to a microphone at the same time audio files are playing). *It would have been obvious* to further modify the audio controller (MP3 controller 18, which provides access to the primary device storage locations while in power saving mode) to accept sound from a microphone while an audio file controlled by the audio device (MP3 controller 18) was playing and output the voice after it had

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been amplified at the same time the audio file was being played, in view of the teachings of Lee.

Therefore, the rejections of claims 21 and 25 are upheld.

8. Applicant's arguments with respect to claim 28 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Regarding claim 28, it is again asserted that while Du et al., Altare et al., or Lee may not individually teach each limitation of the claim, the rejection is based on the combination of references, and the combined teachings would suggest to one of ordinary skill in the art a DSP to write to user files to the storage location attached to a primary device when the primary device was in the power saving state.

9. Furthermore, with regard to the use of official notice in the rejections of claims 22-24, 26, 27, 31-33, 37, 38, 42-44, and 46, it is noted that the applicant has not made any attempt to traverse the assertion of official notice, therefore the well-known in the art statement is taken to be admitted prior art (see MPEP 2144.03)

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims ¹²⁻¹³11 and ¹⁷14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is currently amended to include the limitation of "checking a vector table to determine whether to read the boot program to be loaded to the DSP from a ROM, SRAM, or a combination of both" (emphasis added). This is ambiguous because the claim iterates two distinct boot programs, i.e. "the boot program" (the original boot program first loaded onto the DSP) and "updates to the DSP boot program" (an updated boot program to be loaded after the first original boot program is loaded). The recitation of "the boot program to be loaded" in the 7th line of claim 11, therefore, does not distinctly point out which boot program is being referred to.

Furthermore, given that dependent claims (such as claim 13) appear to refer to the updates to the boot program directly ("updates to the DSP boot program") the recitation of "the boot program" in the 7th line of claim 11 seems to point more toward the original boot program first loaded onto the DSP. If this is the case, this raises the issue of enablement. Fig. 7b describes the updating method embodied by claim 11. As illustrated by Fig. 7b, it appears that the vector table is checked to determine whether the *updated boot program* is to be loaded to the DSP from a ROM, SRAM, or a combination of both. It is the Examiner's understanding of the invention that the original first boot program is loaded from the system internal ROM (step 702b). An updated boot program is searched for in an external ROM (step 704b) and the boot program

upgrade is loaded to the ROM, SRAM, or a combination of both (step 705b). This then necessitates the step of checking the vector table to determine whether the *program to be loaded* (i.e. the updated boot program), is to be loaded from the ROM, SRAM, or a combination of both (step 706b). Clearly, there is no enabling description in the specification for checking the vector table to determine whether the *original first boot program* is to be loaded from the ROM, SRAM, or a combination of both.

Claims 14-16 further confuse the issue, as they require the ROM or the SRAM (to which the vector table points) for the DSP boot program (which seems to refer to the original first boot program). Again, there is no enabling description in the specification for searching for the original first boot program in any place but the system internal ROM (see Fig. 7b, step 702b as well as paragraph 63 of the Applicant's specification).

To resolve this issue, claim 11 should be amended to *clearly and distinctly* point out which boot program (e.g. the original boot program or the updated boot program) is being referred to by the boot program to be loaded.

Furthermore, claims 14-16 (and possibly claims 12, 13, and 17) should be amended to reflect *clearly and distinctly* which boot program is being referred to in each claim.

For the purposes of examination, "the boot program to be loaded" in claim 11 has been interpreted herein as the updated boot program, and "the boot program" in claims 14 and 15 has been interpreted herein as "the boot program to be loaded" (i.e. the updated boot program).

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Schurecht et al. (U.S. Patent 6,260,157).

In regard to claim 11, Schurecht et al. disclose a method comprising:

searching a storage location (Fig. 1, program ROM 45 and program RAM 50) for a digital signal processor (slave processor 30 is a DSP, column 4, lines 31-33 and lines 39-42) boot program (program code for the DSP 30 is loaded from program ROM 45 and program RAM 50, column 4, lines 8-10);

providing the DSP with the boot program (program instructions and the patch vector table which points to addresses in the program ROM 45 when no update is performed are loaded from program ROM 45 and data RAM 65, column 4, lines 43-45 and column 4, line 56 to column 5, line 9);

searching for updates to the DSP boot program (if patch programs are utilized, they are found in external memory 7, column 5, lines 10-14);

providing the DPS with updates fort the DSP program (the patch programs are loaded into the program RAM 50 for execution by the DSP, column 5, lines 10-18); and

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checking a vector table to determine whether to read the boot program to be loaded to the DSP from a ROM, SRAM, or both (the patch vector table points to the location of the patch instructions, which may be in the data RAM 65, a return point in program ROM 45, or a combination of both, column 5, lines 14-42).

In regard to claims 12 and 13, Schurecht et al. disclose searching a storage location for a DSP program and searching a storage location for updates to the DSP boot program with a microcontroller (program instructions and patches are searched for by the ASIC 20, column 4, lines 3-22).

In regard to claims 14 and 15, Schurecht et al. disclose searching the ROM and SRAM for the DSP boot program (DSP programs are stored on the program RAM 45 and program ROM 50, column 4, lines 6-10).

In regard to claims 16 and 17, Schurecht et al. disclose searching the SRAM and an external ROM for updates to the DSP boot program (patches are loaded from external memory 7 or program RAM 50, column 5, lines 10-14).

14. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Du et al.

Du et al. discloses a method of processing an audio file located on a primary device's storage location comprising:

accepting a user request at the keypad (function keys 66);

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converting the user request to an entry code;

transmitting the entry code to an audio device (controller 18; the external function keys 66, allow a user to input a request, column 4, lines 56-58; since the function keys are external to the controller 18, they must necessarily convert the user request to an entry code and transmit it to the controller 18);

determining the function of the entry code at the audio device (controller 18 includes a function key interface 46 to interpret commands generated by function keys 66, column 4, lines 64-67); and

processing the audio file on the primary device's storage location (controller 18 determines the MP3 file indicated and retrieves it from a drive, column 5, lines 13-16), wherein processing the audio file on the primary device's storage location comprises

accepting a user request to play an audio file from a storage location (disk drive 20 or CD-ROM drive 22) where the storage location is attached to the primary device (column 5, lines 13-16);

transmitting the user request to play an audio file to a micro-controller (function key interface 66 generates command to the processor 48, column 4, lines 64-67);

determining the format, name, and location of the audio for which the play request has been made (processor 48 traverses the directory structure according to user commands, column 5, lines 6-9);

transmitting the format, name, and location of the audio file to a DSP (processor 48 retrieves the selected file from the drive and sends it to decoder 58, column 5, lines 13-16 and 21-22); and

notifying the DSP that it is time to start playing the audio file (once the file is received by the decoder 48, it is converted to PCM data sent to DAC 60 to be converted to an analog waveform and played, column 5, lines 26-28, 36-38, and 40-43).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-10, 18, 20, 25, 28-30, 34, 36, 39-41, 45, and 47-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al., in view of Altare et al.

In regard to claim 1, Du et al. discloses a method comprising:

recognizing that a primary device attached to a storage location has been placed in a power saving mode; and

switching file access control of the primary device's storage location from the primary device to an audio device after the primary device has been placed in a power saving mode (Fig. 2, when the system is off, a controller 18 is used to traverse drives 20 and/or 22, column 4, lines 6-12).

Du et al. do not disclose recording audio files to the primary device's storage location while the primary device is in the power saving mode.

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Altare et al. discloses an MP3 recorder/player for use with a CD-ROM that converts analog sound or speech to digital code (digitize, column 12, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to also record audio files in addition to playing back audio files while the primary device was in power saving mode, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claim 2, Du et al. discloses the primary device (Fig. 3, computer system 10) sending a signal to the audio device (controller 18) to alert the audio device that the primary device has been placed in a power saving mode (switches 68 decouple the controller 18 when the system 10 is ON, column 6, lines 25-29; power is supplied to the controller 18 when the system 10 is OFF and a function key is pressed, column 6, lines 17-25; furthermore, the switches 68 must necessarily couple when the system 10 is switched from ON to OFF).

In regard to claim 3, Du et al. discloses switching control of the primary devices storage location (drives 20 and/or 22) and the primary devices CODEC (MP3 decoder) to the audio device (controller 18) upon a user request while the primary device (system 10) is not in power saving mode (MP3 files are decoded and stored on drives 20 and/or 22 when the system 10 is ON, column 7, lines 31-37).

In regard to claims 4 and 5, Du et al. discloses the audio device is installed within the primary device (Fig. 3) or is external to the primary device (Figs. 5A and 5B, column 6, lines 42-43; note also that MP3 decoding takes place at the external MP3 device, column 6, lines 55-58).

In regard to claim 6, Du et al. discloses the audio device is coupled to the primary device through a USB connection (column 6, lines 61-64).

In regard to claim 7, Du et al. discloses the primary device is a laptop computer (portable laptop computer system 10, column 3, lines 44-45).

In regard to claims 8-10, Du et al. discloses an interface to a CODEC that converts digital code to analog sound, speech, and/or video (controller 18 includes an integrated DAC to convert digital to analog, column 4, lines 22-25; and video driver circuitry, lines 36-38).

Du et al. further discloses that a CODEC can be implemented in hardware (wherein the controller includes an integrated DAC) or in a combination of hardware and software, or a medium including data that when accessed by the audio device, causes the audio device to convert analog sound (wherein an external DAC is used, and the controller 18 includes a decoder algorithm stored in flash memory, column 4, lines 25-27 and column 5, lines 28-29).

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Du et al. does not disclose converting analog sound, speech, and/or video to digital code.

Altare et al. discloses an MP3 recorder/player for use with a CD-ROM that converts analog sound or speech to digital code (digitize, column 12, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to also convert analog sound, speech, and/or video to digital code, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claim 18, Du et al. discloses a method of processing an audio file located on a primary device's storage location comprising:

- accepting a user request at the keypad (function keys 66);

- converting the user request to an entry code;

- transmitting the entry code to an audio device (controller 18; the external function keys 66, allow a user to input a request, column 4, lines 56-58; since the function keys are external to the controller 18, they must necessarily convert the user request to an entry code and transmit it to the controller 18);

- determining the function of the entry code at the audio device (controller 18 includes a function key interface 46 to interpret commands generated by function keys 66, column 4, lines 64-67); and

- processing the audio file on the primary device's storage location, which is attached to a primary device, according to the function determined at the audio device,

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(controller 18 determines the MP3 file indicated and retrieves it from a drive, column 5, lines 13-16), while the primary device is in power saving mode (a playback key starts playback while the primary device is in power saving mode, column 4, lines 56-67).

Du et al. does not disclose the function is selected from the group consisting of recording sound to the primary device's storage location, and providing a karaoke feature.

Altare et al. discloses an MP3 recorder/player for use with a CD-ROM that converts analog sound or speech to digital code (digitize, column 12, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to also record audio files in addition to playing back audio files while the primary device was in power saving mode, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claim 20, Du et al. does not disclose any features of the claim.

Altare et al. discloses :

accepting user request to record sound to a storage location, where the storage location is attached to the primary device (menu selection includes Record selection, column 9, line 6);

transmitting the user request to record sound to a microcontroller (Fig. 1, Keyboard processor 35 manages the operator interface, column 12, lines 9-12);

accepting sound into a microphone (43, column 12, lines 5-9);

receiving sound accepted into the microphone into a CODEC (33, column 12, lines 5-9;

converting the sound from an analog stream at the CODEC to a digital stream (the CODEC is in connection with a hard disk, therefore the CODEC must convert the analog stream to a digital stream, see Fig. 1);

transmitting the digital stream from the CODEC to a digital interface (See Fig. 1, connection between audio CODEC 33 and MP3 Encoder 34);

receiving the digital stream from the digital interface into a DSP (column 10, lines 27-30);

performing noise cancellation if necessary (MP3 encoders inherently adjust to reduce quantization noise if the quantization noise exceeds the masking threshold).

compressing the digital stream if necessary (MP3 encoders inherently compress a digital audio stream); and

writing the digital stream to a storage location (hard disk 30, column 10 lines 37-41).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to perform the steps as disclosed by Altare to record sound from a microphone, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claim 25, Du et al. discloses the audio file has a MP3 format (column 1, lines 40-41).

In regard to claim 28, Du et al. discloses an apparatus comprising:

a micro-controller (Fig. 4, processor 48);

an input device coupled to the micro controller, to receive user entries to control a primary device's audio device when the primary device is in a power saving state (function keys 66);

an interface to the micro-controller, the interface to provide the micro-controller with access to a storage location, wherein the storage location is attached to the primary device (see Fig. 1, disk drive 20 and CD-ROM 22 are coupled to the CPU 12 of the computer system 10 and Fig. 4, Host IDE bus and Slave IDE bus);

a gateway coupled to the micro-controller (function key interface 46 and LCD interface 57 each act as gateways to their respective external devices);

a DSP coupled to the gateway, the DSP to read user requested files and decode user requested files when the device is in power saving mode (decoder 58, column 5, lines 21-22 and lines 36-38 and column 6, lines 18-20); and

an output port coupled to the DSP (decoder), the output port to transmit a decoded audio stream out of the DSP (column 5, lines 38-43).

Du et al. does not disclose that the DSP is to write to user files; and

that the output port receives a digital signal into the DSP.

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Altare et al. discloses a system comprising a DSP (MP3 encoder/decoder 34) that writes to user files (to hard disk 30, column 10, lines 31-41); and

an input/output port to receive a digital signal into the DSP (see Fig. 1, data from audio codec 33 is a digital signal, passed to MP3 encoder/decoder 34, column 10, lines 19-20 and lines 27-30).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to include means to receive a digital signal and write to user files, so the user would be able to record analog input from either a microphone or analog line in without having to turn the computer on, thereby saving battery power.

In regard to claims 29 and 30, Du et al. discloses the interface is an IDE interface (see Fig. 1, disk drive 20 and CD-ROM 22 are coupled to the CPU 12 of the computer system 10 and Fig. 4, Host IDE bus and Slave IDE bus) and the storage location is a hard drive (20, column 3, line 58).

In regard to claim 34, Du et al. suggests the primary device is a notebook computer (portable laptop computer system 10, column 3, lines 44-45).

In regard to claim 36 Du et al. discloses a USB interface coupled to the microcontroller (column 6, lines 61-64).

In regard to claim 39, Du et al. discloses a ROM coupled to the microcontroller (decoder 58 stores a decoder algorithm therein, column 5, lines 26-28).

In regard to claim 40, Du et al. discloses an SRAM coupled to the microcontroller (50, column 5, lines 16-18).

In regard to claim 41, Du et al. discloses an SD flash controller coupled to the micro-controller (flash memory 52, column 5, lines 29).

In regard to claim 45, Du et al. must inherently have an AC link interface coupled to the DSP in order to charge the battery of the primary device.

In regard to claims 47-50, Du et al. discloses the device is a single device that is internal to the primary device (Fig. 1, controller 18 is within the computer system 10), as well as a part of a single device which is external to the primary device (Fig 5A, controller 18' is operable with external MP3 player 70, column 6, lines 42-43).

In regard to claim 51, Du et al. discloses an interface coupled to the controller comprises a plurality of interfaces (column 6, lines 61-64).

In regard to claim 52, Du et al. discloses a storage location comprises a plurality of storage locations (drives 20 and 22).

17. Claims 22-24, 26, 27, 31-33, 37, 38, 42-44, and 46 rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al., in view of Altare et al., and further in view of the Applicant's admitted prior art.

In regard to claims 22 and 23, neither Du et al. nor Altare et al. explicitly disclose how a function related to a keypad entry code is determined.

The Applicant's admitted prior art discloses it is notoriously well known and recognized in the art to compare an entry code to a table of entry codes including corresponding functions associated with each entry code to determine the function related to a keyboard entry node.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Du et al. and Altare et al. to compare an entry code to a table of entry codes including corresponding functions associated with each entry code to determine the function related to a keyboard entry node, since this provides a extremely simple, fast means to associate a user entry on a keyboard with the corresponding function, especially when there are a limited number of keys and associated functions.

In regard to claims 24, 26, and 27, Du et al. discloses that the audio controller 18 is a general purpose audio controller capable of receiving, playing, and/or decompressing any type of audio data (column 7, lines 11-19).

Neither Du et al. nor Altare et al. explicitly disclose that the data is CD audio data, WAV data, or AAC data.

The Applicant's admitted prior art discloses it is notoriously well known and recognized in the art to code audio as CD audio data, WAV data, or AAC data.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to handle CD audio data, WAV data, or AAC data since these are all common audio formats, and a user would most likely have audio in these formats. By modifying Du et al. to handle these formats, it would allow the method to process more of the files a user would have, eliminating the need for several different products for each format.

In regard to claims 31-33 and 43-44 neither Du et al. nor Altare et al. disclose the storage location is a CD-RW drive, or a Smartmedia flash memory, however, The Applicant's admitted prior art discloses CD-RW and Smartmedia flash memory drives are notoriously well known in the art and it would have been obvious to one of ordinary skill in the art at the time of invention to use a CD-RW drive or Smartmedia flash memory as a storage location since CD-RW or Smartmedia flash memory would provide a rewritable, compact, and portable means for storage.

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Furthermore, if a Smartmedia flash memory were used for storage, inherently, a Smartmedia interface would be needed to read and write from the Smartmedia flash memory.

In regard to claims 37, 38, and 46, Du et al. discloses a master (host) port and a slave port coupled to the micro-controller (Fig. 4, Host IDE bus and Slave IDE bus).

Neither Du et al. nor Altare et al. disclose an I2C master port or an I2C slave port.

The Applicant's admitted prior art discloses it is notoriously well known and recognized in the art that I2C is an industry standard for inter-IC control.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. and Altare et al. to include an I2C master port and an I2C slave port, since I2C provides a standard interface between IC's that alleviates many interfacing problems.

In regard to claim 42, neither Du et al. nor Altare et al. explicitly disclose that the micro-controller is an 8051. However, The Applicant's admitted prior art discloses it is notoriously well known that the 8051 is one of the most popular micro-controllers used and it would have been obvious to one of ordinary skill in the art at the time of invention to use an 8051 microcontroller because they are prevalent in the industry and cheap.

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18. Claims 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al., in view of Altare et al., and further in view of Lee (U.S. Patent 6,278,048).

In regard to claim 21, Du et al. discloses transferring control of a primary device's audio control to a secondary device's audio control (column 4, lines 6-12).

Du et al. does not disclose any microphone features.

Altare et al. discloses accepting sound into a microphone (column 12, lines 5-9); amplifying the voice input at the microphone (a microphone input must inherently be amplified to bring the signal to line level before digitization); and

outputting the voice after it has been amplified through a speaker (column 10, lines 19-27).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Du et al. to accept a microphone and output the voice through a speaker, so the user would be able to record and playback input from a microphone without having to turn the computer on, thereby saving battery power.

Du et al. and Altare et al. do not disclose accepting sound in the microphone while an audio files is playing; or

outputting the voice at the same time the audio file being played is having its sound output through the speaker.

Lee disclose a portable MP3 karaoke player that accepts sound in a microphone while an audio file controlled by an audio device (Fig. 1, receiver 15) is playing from a storage location (column 3, lines 60-67); and

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outputting the voice at the same time the audio file being played is having its sound output through the speaker (column 4, lines 21-39).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify the combination of Du et al. and Altare et al. to accept and playback a voice through a microphone while music was playing in order to implement a karaoke feature that would allow a user to use their laptop as a karaoke machine without having to buy a separate device.

In regard to claim 35, neither Du et al. nor Altare et al. disclose the device is an audio jukebox.

Lee discloses an audio jukebox (karaoke machine, column 3, lines 31-33).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Du et al. and Altare et al. so the primary device was a jukebox, so the portable jukebox would be able to save power allowing it to be used for longer periods where power was not available (outside, etc.)

Conclusion


19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Albertalli whose telephone number is (571) 272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BLA 10/27/05



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PRIMARY EXAMINER